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ARMY ELECTRONICS COMMAND WHITE SANDS MISSILE RANGE N--ETC F/G 4/2
15002A LITTLE JOHN MISSILE NUMBER 1936, ROUND NUMBER 722 RG (7 --ETC(U)
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DR-933
December 1976

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METEOROLOGICAL DATA REPORT

15002A LITTLE JOHN
MISSILE NO. 1936, ROUND NO. 722 RG
(7 December 1976)

BY

WSMR METEOROLOGICAL TEAM

ATMOSPHERIC SCIENCES LABORATORY
WHITE SANDS MISSILE RANGE, NEW MEXICO

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UNITED STATES ARMY ELECTRONICS COMMAND

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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) Meteorological data gathered for the launching of 15002A Little John, Missile Number 1936, Round Number 722 RG, are presented in tabular form.		

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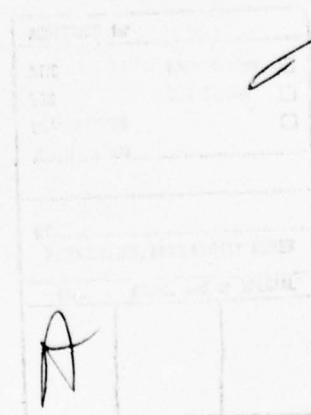
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CONTENTS

	PAGE
INTRODUCTION -----	1
DISCUSSION -----	1
TABLES	
I. Surface Observations Taken at L-306 -----	1
II. Anemometer-Measured Wind Speed and Direction, Pole No. 1 -----	2
III. Pilot-Balloon-Measured Wind Data, Release No. 1 at 1330 MST -----	4
IV. Pilot-Balloon-Measured Wind Data, Release No. 1 at 1340 MST -----	5
V. Jallen Significant Level Data (Release Time: 1000 MST) -----	7
VI. Jallen Upper Air Data (Release Time: 1000 MST) -----	9
VII. Jallen Mandatory Levels (Release Time: 1000 MST) -----	16
VIII. Jallen Significant Level Data (Release Time: 1330 MST) -----	17
IX. Jallen Upper Air Data (Release Time: 1330 MST) -----	18
X. Jallen Mandatory Levels (Release Time: 1330 MST) -----	20



INTRODUCTION

15002A Little John, Missile Number 1936, Round Number 722 RG, was launched from L-306, White Sands Missile Range (WSMR), New Mexico, at 1340 HRS MST, 7 December 1976. The scheduled launch time was 1330 HRS MST.

DISCUSSION

Meteorological data were recorded and reduced by the WSMR Meteorological Team, Atmospheric Sciences Laboratory (ASL), WSMR, New Mexico. The data are presented in the following tabulations.

ELEVATION	4,005.0	FEET/MSL
PRESSURE	882.0	MBS
TEMPERATURE	11.0	°C
RELATIVE HUMIDITY	53	%
DEW POINT	1.7	°C
DENSITY	1,075.9	GM/M ³
WIND SPEED	04	MPH
WIND DIRECTION	180	DEGREES
CLOUD COVER	3	CI

TABLE I. SURFACE OBSERVATIONS TAKEN AT L-306,
1340 HRS MST/7 DECEMBER 1976.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
-5.00	3.0	132	-0 9.5	5.0	180	-0 0.50	5.0	181
-4.30	4.0	131	-0 9.0			-0 0.25		
-4.00	6.0	151	-0 8.5			0 0.00		
-3.30	4.0	154	-0 8.0			+0 0.25		
-3.00	5.0	151	-0 7.5			+0 0.50		181
-2.30	8.0	183	-0 7.0			+0 0.75		182
-2.00	7.0	183	-0 6.5			+0 1.00		182
-1.45	6.0	175	-0 6.0			+0 1.25		182
-1.30	7.0	173	-0 5.5			+0 1.50		183
-1.15	6.0	171	-0 5.0			+0 1.75		
-0.60		171	-0 4.5		180	+0 2.00		
-0.55		172	-0 4.0		181	+0 2.25		
-0.50		180	-0 3.5			+0 2.50		
-0.45	6.0		-0 3.0			+0 2.75		
-0.40	4.0		-0 2.5			+0 3.00		
-0.35	4.0		-0 2.0			+0 3.25		
-0.30	6.0		-0 1.75			+0 3.50		183
-0.25	6.0		-0 1.50			+0 3.75		186
-2.20	6.0		-0 1.25			+0 4.00		186
-0.15	5.0		-0 1.00			+0 4.25		174
-0.10	5.0	180	-0 0.75	5.0	181	+0 4.50	5.0	174

TABLE II. ANEMOMETER-MEASURED WIND SPEED AND DIRECTION, POLE NO. 1
15002A LITTLE JOHN, MISSILE NO. 1936, ROUND NO. 722 RG
LAUNCHED FROM L-306, 1330 MST/7 DECEMBER 1976

WSTM COORDINATES: X = 468,607.93 Y = 438,513.71 Z = 4,005.00

NOTE: WIND DIRECTION DATA ARE REFERENCED TO THE FIRING AZIMUTH 170.0°.

T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG	T-TIME (MIN-SEC)	SPEED (MPH)	DIR DEG
+0 4.75	5.0	174	+0 10.00	5.0	174	+0 20.50	4.0	173
+0 5.00			+0 10.50	4.0		+0 21.00	4.0	
+0 5.25			+0 11.00			+0 21.50	4.0	
+0 5.50			+0 11.50			+0 22.00	4.0	
+0 5.75			+0 12.00			+0 22.50	3.0	
+0 6.00			+0 12.50			+0 23.00		
+0 6.25			+0 13.00			+0 23.50		
+0 6.50			+0 13.50			+0 24.00		
+0 6.75			+0 14.00			+0 24.50		
+0 7.00			+0 14.50			+0 25.00	3.0	
+0 7.25			+0 15.00			+0 25.50	2.0	
+0 7.50			+0 15.50			+0 26.00		
+0 7.75			+0 16.00			+0 26.50		
+0 8.00			+0 16.50		174	+0 27.00		
+0 8.25			+0 17.00		173	+0 27.50		
+0 8.50			+0 17.50			+0 28.00		
+0 8.75			+0 18.00			+0 28.50		173
+0 9.00			+0 18.50			+0 29.00		171
+0 9.25			+0 19.00			+0 29.50		170
+0 9.50			+0 19.50			+0 30.00	2.0	169
+0 9.75	5.0	174	+0 20.00	4.0	173			

TABLE II. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TO THE FIRING AZIMUTH 170.0°.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR	222	3.0	2100	192	7.0
100	217	2.0	2200	192	7.0
200	224	1.0	2300	192	7.0
300	222	2.0	2400	192	5.0
400	210	2.0	2500	188	9.0
500	208	2.0	2600	183	12.0
600	206	2.0	2700	179	15.0
700	203	3.0	2800		16.0
800	200	4.0	2900		17.0
900	196	5.0	3000		17.0
1000	193	6.0	3100	179	18.0
1100	193		3200	180	19.0
1200	194		3300	180	20.0
1300	194		3400	180	21.0
1400	195		3500	181	22.0
1500	194		3600	181	22.0
1600	192		3700	181	23.0
1700	191		3800	182	24.0
1800	191	6.0	3900	182	25.0
1900	191	7.0	4000	CROSSED BASE LINE	
2000	191	7.0			

TABLE III. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM L-306, AT 1330 MST/7 DECEMBER 1976
15002A LITTLE JOHN, MISSILE NO. 1936, ROUND NO. 722 RG

PIBAL RELEASE POINT WSTM COORDINATES:

X = 467,067.46 Y = 440,662.81 Z = 3,997.06

NOTE: WIND DIRECTION DATA ARE REFERENCED TO THE FIRING AZIMUTH 170.0°.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)	HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
SUR		CALM	2100	343	12.0
100	053	2.0	2200	340	15.0
200	053	3.0	2300	337	18.0
300	053	5.0	2400	335	22.0
400	053	7.0	2500	334	25.0
500	056	7.0	2600	333	28.0
600	063	6.0	2700	332	31.0
700	073	5.0	2800	331	34.0
800	082	4.0	2900	331	35.0
900	066	4.0	3000	332	36.0
1000	048	4.0	3100	332	36.0
1100	033	4.0	3200	332	36.0
1200	025	5.0	3300	332	37.0
1300	020	5.0	3400	331	37.0
1400	016	6.0	3500	330	37.0
1500	013	6.0	3600	330	36.0
1600	006	7.0	3700	329	36.0
1700	360	7.0	3800	328	35.0
1800	356	8.0	3900	328	35.0
1900	350	9.0	4000	328	35.0
2000	346	11.0	4100	328	35.0

TABLE IV. PILOT-BALLOON-MEASURED WIND DATA, RELEASE NO. 1
RELEASED FROM D 3 1/2, AT 1340 MST/7 DECEMBER 1976
15002A LITTLE JOHN, MISSILE NO. 1936, ROUND NO. 722 RG

PIBAL RELEASE POINT WSTM COORDINATES:

X = 443,023.73 Y = 388,397.95 Z = 3,972.63

APPROXIMATELY: 7 1/2 MILES SOUTHWEST OF LAUNCHER.

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
4200	329	35.0
4300	330	
4400	331	
4500	332	
4600	334	
4700	336	35.0
4800	338	36.0
4900	340	35.0
5000	342	35.0
5100	334	34.0
5200	336	34.0
5300	347	32.0
5400	348	31.0
5500	349	30.0
5600	349	29.0

HEIGHT (FEET)	DIRECTION (DEGREES)	SPEED (MPH)
5700	350	28.0
5800	350	27.0
5900	350	26.0
6000	350	25.0
6100	351	24.0
6200	350	25.0
6300	350	25.0
6400	350	26.0
6500	350	27.0
6600	349	28.0
6700	349	29.0
6800	348	29.0
6900	346	29.0
7000	345	29.0

TABLE IV. (CONT)

NOTE: WIND DIRECTION DATA ARE REFERENCED TRUE NORTH.

WSTM SITE COORDINATES
45C451.60 FEET E
464023.05 FEET N

SIGNIFICANT LEVEL DATA
3420030396
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76
ASCENSION NO. 396

TABLE V

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
882.6	4051.0	-1.4	-5.4	74.0
872.1	4363.6	-2.6	-5.7	79.0
864.3	4557.9	-2.2	-5.5	78.0
856.6	4832.8	.8	-8.4	50.0
850.0	5037.2	1.8	-8.6	48.0
821.6	5936.1	1.2	-9.4	45.0
775.2	7330.0	-1.2	-11.3	46.0
700.0	10141.0	-6	-10.8	46.0
655.8	11851.9	-1.2	-14.0	37.0
617.0	13440.6	-4.3	-17.8	34.0
535.4	16872.8	-11.9	-15.5	51.0
500.0	18770.1	-15.2	-24.4	45.0
456.6	21005.3	-20.1	-30.7	38.0
400.0	24177.2	-28.7	-38.0	40.0
325.2	28924.3	-41.7	-45.7	41.0
300.0	30704.5	-46.7		
276.4	32473.9	-51.6		
250.0	34591.9	-57.1		
240.0	35435.8	-58.5		
231.6	36182.4	-55.6		
202.6	38951.7	-51.5		
200.0	39216.6	-59.7		
192.0	40060.1	-58.3		
155.4	44370.4	-65.6		
150.0	45082.0	-63.9		
137.0	46927.4	-60.7		
120.8	49501.1	-62.0		
108.4	51689.5	-65.9		
100.0	53307.1	-65.2		
86.0	56317.8	-67.9		

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1000 HRS MST
ASCENSION NO. 396

SIGNIFICANT LEVEL DATA
3420030396
JALLEN

WSTM SITE COORDINATES
45C451.60 FEET E
464023.05 FEET N

TABLE V (CONT)

PRESSURE GEOMETRIC ALTITUDE MILLIBARS MSL FEET	TEMPERATURE		REL. HUM. PERCENT
	AIR DEGREES	DEWPOINT CENTIGRADE	
70.0 60411.2	-66.9		
64.5 62043.8	-66.7		
60.4 63366.4	-63.1		
55.2 65186.1	-65.2		
50.0 67189.7	-62.4		
47.2 68362.7	-63.1		
43.0 70273.5	-59.4		
39.8 71865.0	-61.6		
30.0 77747.4	-54.7		
21.8 84498.3	-55.6		
20.0 86317.6	-52.6		
15.4 90595.4	-48.9		
13.8 94317.8	-52.6		
10.0 101265.9	-48.9		
8.9 103812.6	-47.1		

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1000 HRS MST
ASCENSION NO. 396

UPPER AIR DATA
3420030396
JALLEN
TABLE VI

WSM SITE COORDINATES
464023.05 FEET E
464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
4051.0	882.6	-1.4	-5.4	74.0	1125.5	642.8	80.0	1.9	1.000272
4500.0	867.6	-2.4	-5.6	78.4	1114.2	641.6	348.3	2.6	1.000269
5000.0	851.2	1.6	-8.5	46.7	1077.7	646.2	325.0	5.2	1.000256
5500.0	835.3	1.5	-9.0	45.5	1058.0	646.1	317.7	8.1	1.000251
6000.0	819.6	1.1	-9.5	45.0	1039.7	645.6	314.0	11.0	1.000247
6500.0	804.2	.2	-10.2	45.4	1022.4	644.6	310.6	13.8	1.000242
7000.0	789.0	-.6	-10.9	45.8	1007.4	643.5	311.3	16.9	1.000238
7500.0	774.2	-1.2	-11.2	46.0	990.3	642.9	325.2	21.8	1.000234
8000.0	759.5	-1.1	-11.2	46.0	971.2	643.0	333.0	25.7	1.000230
8500.0	745.2	-1.0	-11.1	46.0	952.5	643.2	338.0	26.3	1.000226
9000.0	731.1	-.8	-11.0	46.0	934.1	643.3	340.7	25.7	1.000222
9500.0	717.3	-.7	-10.9	46.0	916.0	643.4	342.1	24.4	1.000218
10000.0	703.8	-.6	-10.8	46.0	898.3	643.6	340.4	27.5	1.000214
10500.0	690.5	-.7	-11.4	44.1	881.7	643.5	340.0	30.7	1.000209
11000.0	677.4	-.9	-12.3	41.5	865.7	643.2	342.1	33.5	1.000205
11500.0	664.7	-1.1	-13.3	38.9	850.0	643.0	344.1	35.2	1.000201
12000.0	652.1	-1.5	-14.3	36.7	835.2	642.5	346.0	36.0	1.000196
12500.0	639.7	-2.5	-15.5	35.8	822.4	641.3	347.6	36.2	1.000193
13000.0	627.5	-3.4	-16.7	34.8	809.7	640.1	349.1	36.5	1.000189
13500.0	615.6	-4.4	-17.8	34.3	797.3	638.9	350.4	36.1	1.000186
14000.0	603.6	-5.5	-17.9	36.8	785.1	637.6	351.6	35.4	1.000183
14500.0	591.9	-6.6	-18.2	35.2	773.0	636.3	351.1	35.1	1.000180
15000.0	580.4	-7.8	-18.5	41.7	761.2	635.0	349.2	35.2	1.000177
15500.0	568.2	-8.9	-18.8	44.2	749.6	633.6	346.8	36.1	1.000174
16000.0	558.2	-10.0	-19.2	46.7	738.1	632.3	344.1	37.5	1.000172
16500.0	547.7	-11.1	-19.6	45.2	726.5	631.0	342.8	38.6	1.000169
17000.0	536.7	-12.1	-20.2	50.6	715.6	629.7	342.0	39.5	1.000166
17500.0	526.0	-13.0	-21.4	45.0	702.8	628.6	338.2	41.0	1.000163
18000.0	515.6	-13.9	-22.6	47.4	692.3	627.5	336.3	43.0	1.000160
18500.0	505.4	-14.7	-23.8	45.9	680.9	626.5	336.0	45.1	1.000157

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1000 HRS MST
ASCENSION NO. 396

UPPER AIR DATA
3420030396
JALLEN
TABLE VI (CONT)

WSTM SITE COORDINATES
45C451.60 FEET E
464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
19000.0	495.4	-15.7	-25.1	44.3	665.5	625.3	236.6	236.6	46.5	1.000154
19500.0	485.4	-16.8	-26.5	42.7	659.3	623.9	336.4	336.4	45.2	1.000151
20000.0	475.6	-17.9	-27.9	41.1	648.8	622.6	236.4	236.4	43.2	1.000148
20500.0	465.1	-19.0	-29.3	39.6	638.5	621.2	337.8	337.8	41.0	1.000145
21000.0	456.7	-20.1	-30.7	38.0	628.4	619.9	238.5	238.5	39.5	1.000143
21500.0	447.3	-21.4	-31.8	38.3	618.8	618.2	338.3	338.3	39.8	1.000140
22000.0	438.0	-22.8	-33.0	38.6	609.3	616.5	238.2	238.2	40.2	1.000138
22500.0	429.0	-24.2	-34.1	38.9	600.0	614.8	338.2	338.2	40.9	1.000136
23000.0	420.1	-25.5	-35.3	39.3	590.5	613.1	238.4	238.4	41.1	1.000133
23500.0	411.5	-26.9	-36.4	39.6	581.9	611.5	338.7	338.7	40.9	1.000131
24000.0	403.0	-28.2	-37.6	39.9	573.0	609.8	239.0	239.0	40.4	1.000129
24500.0	394.4	-29.6	-38.8	40.1	564.0	608.1	339.5	339.5	39.6	1.000127
25000.0	385.9	-31.0	-40.0	40.2	555.0	606.3	239.8	239.8	38.9	1.000125
25500.0	377.6	-32.3	-41.2	40.3	546.1	604.6	339.7	339.7	38.8	1.000123
26000.0	369.4	-33.7	-42.5	40.4	537.4	602.9	239.6	239.6	38.6	1.000121
26500.0	361.5	-35.1	-43.7	40.5	528.8	601.2	339.6	339.6	38.0	1.000119
27000.0	353.7	-36.4	-44.9	40.6	520.4	599.4	239.8	239.8	37.4	1.000117
27500.0	346.0	-37.8	-46.2	40.7	512.2	597.7	241.5	241.5	37.4	1.000115
28000.0	338.6	-39.2	-47.4	40.8	504.0	595.9	343.1	343.1	37.6	1.000113
28500.0	331.3	-40.5	-48.6	40.9	496.1	594.2	243.7	243.7	38.5	1.000111
29000.0	324.1	-41.9	-50.3	39.3**	488.2	592.4	344.8	344.8	39.4	1.000109
29500.0	316.8	-43.3	-54.4	27.7**	480.2	590.6	246.9	246.9	40.4	1.000107
30000.0	309.7	-44.7	-59.9	16.2**	472.3	588.8	349.2	349.2	41.2	1.000105
30500.0	302.8	-46.1	-70.0	4.7**	464.6	587.0	251.6	251.6	41.7	1.000104
31000.0	295.9	-47.5			456.9	585.2	353.4	353.4	42.1	1.000102
31500.0	289.2	-48.9			449.2	583.4	253.5	253.5	42.1	1.000100
32000.0	282.5	-50.3			441.6	581.6	354.6	354.6	42.7	1.000098
32500.0	276.1	-51.7			434.2	579.8	255.5	255.5	43.5	1.000097
33000.0	269.6	-53.0			426.5	578.1	356.4	356.4	46.0	1.000095
33500.0	263.3	-54.3			419.0	576.4	257.3	257.3	48.4	1.000093

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
 7 DEC. 76
 ASCENSION NO. 396
 UPPER AIR DATA
 3420030396
 JALLEN
 WSYM SITE COORDINATES
 450451.60 FEET E
 464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPEED KNOTS	
34000.0	257.1	-55.6		411.6	574.7	257.7	49.8	1.000052
34500.0	251.1	-56.9		404.4	572.9	357.2	50.5	1.000090
35000.0	245.1	-57.8		396.5	571.7	255.0	49.5	1.000088
35500.0	239.3	-58.3		388.0	571.1	251.6	48.2	1.000086
36000.0	233.6	-58.3		375.4	573.7	347.5	47.1	1.000084
36500.0	228.1	-56.3		366.4	573.7	244.5	45.6	1.000082
37000.0	222.6	-57.3		359.4	572.3	341.6	44.1	1.000080
37500.0	217.3	-58.4		352.5	570.9	238.1	42.6	1.000079
38000.0	212.1	-59.5		345.8	569.5	333.8	41.0	1.000077
38500.0	207.1	-60.5		339.3	568.1	325.1	39.7	1.000076
39000.0	202.1	-61.2		332.2	567.2	322.9	39.3	1.000074
39500.0	197.3	-59.2		321.3	569.8	216.7	29.4	1.000072
40000.0	192.6	-58.4		312.4	570.9	311.3	39.1	1.000070
40500.0	187.9	-59.0		305.7	570.0	206.2	38.5	1.000068
41000.0	183.3	-59.9		299.5	568.9	302.1	39.1	1.000067
41500.0	178.9	-60.7		293.4	567.8	298.9	39.3	1.000065
42000.0	174.6	-61.5		287.4	566.7	297.1	40.5	1.000064
42500.0	170.3	-62.4		281.6	565.5	296.5	42.4	1.000063
43000.0	166.2	-63.3		275.9	564.4	296.6	44.3	1.000061
43500.0	162.2	-64.1		270.3	563.2	297.5	46.1	1.000060
44000.0	158.3	-65.0		264.8	562.1	298.0	47.5	1.000059
44500.0	154.4	-65.3		258.8	561.7	297.9	47.8	1.000058
45000.0	150.6	-64.1		251.0	563.3	297.6	48.2	1.000056
45500.0	147.0	-63.2		243.8	564.5	295.7	48.5	1.000054
46000.0	143.4	-62.3		236.9	565.7	293.9	49.6	1.000053
46500.0	139.9	-61.4		230.2	566.8	291.8	51.2	1.000051
47000.0	136.5	-60.7		223.9	567.8	289.9	52.8	1.000050
47500.0	133.2	-61.0		218.7	567.5	289.9	54.1	1.000049
48000.0	130.0	-61.2		213.7	567.1	290.3	55.2	1.000048
48500.0	126.9	-61.5		208.8	566.8	292.2	55.7	1.000047

STATION ALTITUDE 4051.00 FEET MSL
 7 DEC. 76
 ASCENSION NO. 396
 UPPER AIR DATA
 3420030396
 JALLEN
 WSTM SITE COORDINATES
 45C451.60 FEET E
 464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
49000.0	123.8	-61.7			204.0	566.4	294.7	56.1	1.000045
49500.0	120.8	-62.0			199.3	566.1	297.4	56.1	1.000044
50000.0	117.9	-62.9			195.3	564.5	300.4	55.5	1.000043
50500.0	115.0	-63.8			191.3	563.7	303.4	54.7	1.000043
51000.0	112.2	-64.7			187.4	562.5	306.2	52.6	1.000042
51500.0	109.4	-65.6			183.6	561.3	309.2	50.6	1.000041
52000.0	106.7	-65.8			179.3	561.0	310.3	46.7	1.000040
52500.0	104.1	-65.5			174.7	561.3	311.2	42.4	1.000039
53000.0	101.5	-65.3			170.2	561.6	309.5	38.1	1.000038
53500.0	99.0	-65.4			166.0	561.6	304.8	33.8	1.000037
54000.0	96.6	-65.8			162.3	561.0	298.8	30.5	1.000036
54500.0	94.2	-66.3			158.6	560.3	292.3	30.8	1.000035
55000.0	91.9	-66.7			155.0	559.7	286.7	31.2	1.000035
55500.0	89.6	-67.2			151.5	559.1	286.1	32.9	1.000034
56000.0	87.4	-67.6			148.1	558.5	285.5	34.5	1.000033
56500.0	85.2	-67.9			144.6	558.2	288.1	35.0	1.000032
57000.0	83.1	-67.7			140.9	558.4	290.5	35.5	1.000031
57500.0	81.0	-67.6			137.3	558.5	292.5	35.6	1.000031
58000.0	79.0	-67.5			133.9	558.7	294.4	35.6	1.000030
58500.0	77.1	-67.4			130.5	558.9	296.5	35.4	1.000029
59000.0	75.1	-67.2			127.1	559.0	299.0	34.6	1.000028
59500.0	73.3	-67.1			123.9	559.2	301.7	33.5	1.000028
60000.0	71.5	-67.0			120.8	559.4	304.8	34.0	1.000027
60500.0	69.7	-66.9			117.7	559.5	307.8	34.2	1.000026
61000.0	68.0	-66.8			114.8	559.6	307.6	32.3	1.000026
61500.0	66.3	-66.8			111.9	559.7	305.2	29.1	1.000025
62000.0	64.6	-66.7			109.1	559.8	300.8	25.5	1.000024
62500.0	63.1	-65.5			105.8	561.4	292.6	21.5	1.000024
63000.0	61.5	-64.1			102.5	563.3	282.9	19.1	1.000023
63500.0	60.0	-63.3			99.6	564.4	280.2	21.7	1.000022

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1000 HRS MST
ASCENSION NO. 766

UPPER AIR DATA
3420030356
JALLEN
TABLE VI (CONT)

WSTM SITE COORDINATES
450491.60 FEET E
464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
					KNOTS	KNOTS			
64000.0	58.5	-63.8		97.4	563.6		278.0	24.4	1.000022
64500.0	57.1	-64.4		95.3	562.9		279.2	25.2	1.000021
65000.0	55.7	-65.0		93.2	562.1		280.4	25.9	1.000021
65500.0	54.4	-64.6		90.9	562.4		283.4	25.6	1.000020
66000.0	53.0	-64.1		88.3	563.3		287.9	24.5	1.000020
66500.0	51.7	-63.4		85.9	564.3		291.4	23.3	1.000019
67000.0	50.5	-62.7		83.5	565.2		288.3	20.3	1.000019
67500.0	49.2	-62.6		81.6	565.3		284.2	17.5	1.000018
68000.0	48.0	-62.9		79.6	564.9		276.6	15.1	1.000018
68500.0	46.9	-62.8		77.7	565.0		268.0	13.2	1.000017
69000.0	45.8	-61.9		75.4	566.3		260.1	12.8	1.000017
69500.0	44.7	-60.9		73.3	567.6		266.5	14.6	1.000016
70000.0	43.6	-59.9		71.2	568.9		271.5	16.5	1.000016
70500.0	42.5	-59.7		69.4	569.2		273.3	19.6	1.000015
71000.0	41.5	-60.4		68.0	568.2		274.3	22.9	1.000015
71500.0	40.5	-61.1		66.6	567.3		274.8	25.6	1.000015
72000.0	39.5	-61.4		65.1	566.8		274.7	26.6	1.000014
72500.0	38.6	-60.9		63.3	567.6		274.6	27.3	1.000014
73000.0	37.7	-60.3		61.7	568.4		273.8	27.4	1.000014
73500.0	36.8	-59.7		60.0	569.2		272.8	26.4	1.000013
74000.0	35.9	-59.1		58.5	570.0		271.8	25.7	1.000013
74500.0	35.1	-58.5		56.9	570.8		272.3	26.7	1.000013
75000.0	34.2	-57.9		55.4	571.5		272.7	27.8	1.000012
75500.0	33.4	-57.3		53.9	572.3		271.7	28.2	1.000012
76000.0	32.6	-56.7		52.5	573.1		269.4	28.1	1.000012
76500.0	31.9	-56.2		51.1	573.9		267.1	28.1	1.000011
77000.0	31.1	-55.6		49.8	574.6		263.2	27.2	1.000011
77500.0	30.4	-55.0		48.5	575.4		258.9	26.5	1.000011
78000.0	29.6	-54.7		47.3	575.8		254.2	25.5	1.000011
78500.0	28.9	-54.8		46.2	575.7		247.7	23.8	1.000010

STATION ALTITUDE 4051.00 FEET MSL
 7 DEC. 76 1000 HRS MST
 ASCENSION NC. 796

UPPER AIR DATA
 3420030396
 JALLEN
 TABLE VI (CONT)

WSTM SITE COORDINATES
 450491.50 FEET E
 464023.05 FEET N

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE				DIRECTION DEGREES (TN)	SPEED KNOTS	
79000.0	28.3	-54.9			45.1	575.6	240.4	22.3	1.000010
79500.0	27.6	-54.9			44.1	575.5	234.0	21.4	1.000010
80000.0	27.0	-55.0			43.1	575.4	229.1	20.6	1.000010
80500.0	26.3	-55.1			42.1	575.3	223.9	20.0	1.000009
81000.0	25.7	-55.1			41.1	575.2	233.0	20.4	1.000009
81500.0	25.1	-55.2			40.1	575.1	245.4	21.9	1.000009
82000.0	24.5	-55.3			39.2	575.1	255.7	24.4	1.000009
82500.0	24.0	-55.3			38.3	575.0	261.6	27.7	1.000009
83000.0	23.4	-55.4			37.4	574.9	266.2	31.2	1.000008
83500.0	22.8	-55.5			36.6	574.8	267.9	34.1	1.000008
84000.0	22.3	-55.5			35.7	574.7	265.0	34.6	1.000008
84500.0	21.8	-55.6			34.9	574.6	262.2	35.6	1.000008
85000.0	21.3	-54.8			33.9	575.7	261.4	36.8	1.000008
85500.0	20.8	-53.9			33.0	576.8	261.9	38.2	1.000007
86000.0	20.3	-53.1			32.1	577.9	262.3	39.5	1.000007
86500.0	19.8	-52.4			31.3	578.8	266.3	41.5	1.000007
87000.0	19.4	-52.0			30.5	579.3	270.7	43.8	1.000007
87500.0	18.9	-51.6			29.8	579.9	274.6	46.3	1.000007
88000.0	18.5	-51.1			29.0	580.5	277.8	47.0	1.000006
88500.0	18.1	-50.7			28.3	581.0	280.9	47.7	1.000006
89000.0	17.7	-50.3			27.6	581.6	283.9	48.5	1.000006
89500.0	17.3	-49.8			26.9	582.2	283.7	46.7	1.000006
90000.0	16.9	-49.4			26.3	582.7	281.8	43.6	1.000006
90500.0	16.5	-49.0			25.6	583.3	279.7	40.6	1.000006
91000.0	16.1	-49.3			25.0	582.9	276.8	38.0	1.000006
91500.0	15.7	-49.8			24.5	582.2	272.8	36.2	1.000005
92000.0	15.4	-50.3			24.0	581.6	268.4	34.6	1.000005
92500.0	15.0	-50.8			23.5	580.9	264.1	33.3	1.000005
93000.0	14.7	-51.3			23.0	580.3	264.2	32.6	1.000005
93500.0	14.3	-51.8			22.5	579.6	264.2	31.9	1.000005

STATION ALTITUDE 4051.00 FEET MSL
 7 DEC. 76
 ASCENSION NO. 396
 UPPER AIR DATA
 3420030396
 JALLEN
 WSTM SITE COORDINATES
 450491.60 FEET E
 464023.05 FEET N

TABLE VI (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES (TN)	SPEED KNOTS	INDEX OF REFRACTION
94000.0	14.0	-52.3		22.1	579.0	264.3	31.3	1.000005
94500.0	13.7	-52.5		21.6	578.7	265.1	33.1	1.000005
95000.0	13.4	-52.2		21.1	579.0	265.9	35.6	1.000005
95500.0	13.1	-52.0		20.6	579.4	266.6	38.1	1.000005
96000.0	12.8	-51.7		20.1	579.7	269.2	40.5	1.000004
96500.0	12.5	-51.4		19.6	580.1	273.1	42.5	1.000004
97000.0	12.2	-51.2		19.1	580.4	276.6	45.5	1.000004
97500.0	11.9	-50.9		18.7	580.8	279.1	47.6	1.000004
98000.0	11.6	-50.6		18.2	581.1	279.9	47.8	1.000004
98500.0	11.4	-50.4		17.8	581.5	280.6	48.0	1.000004
99000.0	11.1	-50.1		17.3	581.8	281.3	48.2	1.000004
99500.0	10.9	-49.8		16.9	582.2	277.8	50.3	1.000004
100000.0	10.6	-49.6		16.5	582.5	274.5	52.6	1.000004
100500.0	10.4	-49.3		16.1	582.9	271.5	55.0	1.000004
101000.0	10.1	-49.0		15.7	583.2			1.000004
101500.0	9.9	-48.7		15.4	583.6			1.000003
102000.0	9.7	-48.4		15.0	584.1			1.000003
102500.0	9.5	-48.0		14.6	584.5			1.000003
103000.0	9.2	-47.7		14.3	585.0			1.000003
103500.0	9.0	-47.3		13.9	585.4			1.000003

MANDATORY LEVELS
3420030356
JALLEN
TABLE VII

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1000 HRS MST
ASCENSION NO. 356

PRESSURE GEOPOTENTIAL		TEMPERATURE		REL. HUM. PERCENT	WIND DATA	
MILLIBARS	FEET	AIR DEGREES	DEWPOINT CENTIGRADE		DIRECTION (DEGREES(TA))	SPEED KNOTS
850.0	5035.	1.8	-8.6	46.	324.2	5.4
800.0	6636.	-0.0	-10.4	46.	305.9	14.6
750.0	8326.	-1.0	-11.1	46.	336.3	26.1
700.0	10135.	-0.6	-10.8	46.	325.9	28.5
650.0	12076.	-1.7	-14.5	37.	246.3	36.1
600.0	14150.	-5.9	-18.0	38.	252.0	35.2
550.0	16365.	-10.8	-19.5	49.	343.0	38.4
500.0	18750.	-15.2	-24.4	45.	336.3	45.8
450.0	21334.	-21.0	-31.5	38.	338.4	39.8
400.0	24145.	-28.7	-38.0	40.	335.2	40.2
350.0	27229.	-37.1	-45.5	41.	340.7	37.4
300.0	30655.	-46.7			352.6	41.9
250.0	34529.	-57.1			356.8	50.3
200.0	39137.	-59.7			320.3	39.3
175.0	41977.	-61.5			297.1	40.3
150.0	44977.	-62.9			257.3	48.3
125.0	48687.	-61.6			293.7	55.9
100.0	53162.	-65.2			306.9	35.5
80.0	57584.	-67.5			293.4	35.6
70.0	60227.	-66.9			307.2	34.2
60.0	63298.	-63.3			280.2	21.7
50.0	66963.	-62.4			267.0	19.3
40.0	71504.	-51.5			274.8	20.1
30.0	77446.	-54.7			256.9	26.1
25.0	81269.	-55.2			247.3	22.3
20.0	85049.	-52.6			264.5	40.6
15.0	92105.	-50.8			264.1	33.3
10.0	100764.	-48.9				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76
ASCENSION NO. 397

SIGNIFICANT LEVEL DATA

3420030397

JALLEN

TABLE VIII

WSTM SITE COORDINATES
450451.60 FEET E
464023.05 FEET N

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE		REL. HUM. PERCENT
		AIR DEGREES	DEWPOINT CENTIGRADE	
880.8	4051.0	8.8	-4.7	38.0
850.0	5014.7	7.0	-7.0	36.0
790.8	6950.2	3.4	-5.5	38.0
768.0	7729.0	3.0	-9.3	40.0
715.4	9606.5	.1	-11.3	42.0
700.0	10181.7	2.2	-11.0	37.0
650.8	12107.5	.0	-13.3	36.0
578.4	15181.6	-5.2	-18.9	33.0
500.0	18879.8	-14.0	-26.4	34.0
427.8	22711.8	-22.2	-34.3	32.0
400.0	24322.1	-26.7	-37.8	34.0
358.2	26905.7	-33.8	-43.6	36.0

UPPER AIR DATA
3420030357
JALLEN

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1330 HRS MST
ASCENSION NO. 397

WSTM SITE COORDINATES
450451.60 FEET E
464023.05 FEET N

TABLE IX

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE		REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND		WIND DATA		INDEX OF REFRACTION
		AIR DEGREES	DEWPOINT CENTIGRADE			KNOTS	KNOTS	DIRECTION DEGREES(TN)	SPEED KNOTS	
4051.0	880.8	8.8	-4.7	38.0	1086.3	654.8	120.0	120.0	4.1	1.000263
4500.0	866.3	8.0	-5.8	37.1	1071.7	653.7	55.8	55.8	1.6	1.000258
5000.0	850.5	7.0	-7.0	36.0	1055.7	652.6	245.9	245.9	4.3	1.000253
5500.0	834.8	6.1	-7.5	36.5	1039.7	651.5	335.1	335.1	8.2	1.000248
6000.0	819.3	5.2	-8.3	37.0	1024.0	650.4	235.1	235.1	10.8	1.000244
6500.0	804.2	4.2	-9.0	37.5	1008.5	649.3	338.6	338.6	12.2	1.000240
7000.0	789.3	3.4	-9.5	38.1	997.0	648.3	245.0	245.0	14.7	1.000236
7500.0	774.6	3.1	-9.3	39.4	975.4	648.0	351.1	351.1	17.6	1.000232
8000.0	760.2	2.6	-9.5	40.3	955.0	647.4	257.1	257.1	21.1	1.000228
8500.0	745.9	1.8	-10.1	40.8	943.7	646.5	1.9	1.9	22.9	1.000224
9000.0	732.0	1.0	-10.6	41.4	928.7	645.5	7.0	7.0	22.8	1.000221
9500.0	718.3	.3	-11.1	41.9	913.9	644.6	10.5	10.5	21.3	1.000217
10000.0	704.8	1.5	-11.0	38.6	892.6	646.1	13.3	13.3	19.0	1.000212
10500.0	691.6	1.8	-11.3	36.8	974.9	646.5	10.7	10.7	21.0	1.000208
11000.0	678.7	1.3	-11.5	36.6	860.4	645.8	5.8	5.8	23.0	1.000204
11500.0	665.9	.7	-12.5	36.3	846.0	645.1	359.3	359.3	25.3	1.000200
12000.0	653.5	.1	-13.1	36.1	831.5	644.4	255.3	255.3	26.4	1.000197
12500.0	641.1	-.7	-14.0	35.6	818.6	643.5	352.4	352.4	27.0	1.000193
13000.0	628.0	-1.5	-14.9	35.1	805.6	642.5	250.2	250.2	27.1	1.000189
13500.0	616.9	-2.4	-15.8	34.6	792.8	641.4	343.9	343.9	25.4	1.000186
14000.0	605.2	-3.2	-16.7	34.2	780.2	640.4	238.2	238.2	24.4	1.000182
14500.0	593.7	-4.0	-17.7	33.7	767.9	639.4	334.3	334.3	24.0	1.000179
15000.0	582.4	-4.9	-18.6	33.2	755.7	638.4	232.6	232.6	25.4	1.000176
15500.0	571.2	-6.0	-19.6	33.1	744.1	637.1	331.9	331.9	26.9	1.000173
16000.0	560.1	-7.1	-20.6	33.2	732.5	635.6	233.1	233.1	28.4	1.000170
16500.0	549.1	-8.3	-21.6	33.4	721.9	634.2	333.9	333.9	29.5	1.000167
17000.0	538.4	-9.5	-22.6	33.5	711.0	632.8	234.5	234.5	30.2	1.000164
17500.0	527.9	-10.7	-23.6	33.6	700.3	631.3	332.6	332.6	31.8	1.000161
18000.0	517.6	-11.9	-24.6	33.8	689.6	629.9	230.7	230.7	33.7	1.000158
18500.0	507.5	-13.1	-25.6	33.9	679.5	628.4	332.7	332.7	34.8	1.000156

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1330 HRS MST
ASCENSION NO. 397

UPPER AIR DATA
3420030397
JALLEN

WSIM SITE COORDINATES
450451.60 FEET E
464023.05 FEET N

TABLE IX (CONT)

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	REL. HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA		INDEX OF REFRACTION
						DIRECTION DEGREES (TN)	SPED KNOTS	
19000.0	497.6	-14.3	33.5	665.2	627.0	334.9	35.2	1.000153
19500.0	487.5	-15.3	33.7	658.4	625.7	337.5	34.6	1.000150
20000.0	477.7	-16.4	33.4	647.9	624.4	337.8	34.0	1.000148
20500.0	468.1	-17.5	33.2	637.5	623.1	338.6	33.4	1.000145
21000.0	458.7	-18.5	32.9	627.3	621.8	334.2	33.7	1.000142
21500.0	449.4	-19.6	32.6	617.3	620.4	331.7	34.1	1.000140
22000.0	440.4	-20.7	32.4	607.4	619.1	330.7	34.5	1.000138
22500.0	431.5	-21.7	32.1	597.7	617.8	329.7	35.7	1.000135
23000.0	422.7	-23.0	32.4	588.5	616.2	328.5	36.7	1.000133
23500.0	414.0	-24.4	33.0	579.6	614.5	327.0	37.5	1.000131
24000.0	405.4	-25.8	33.6	570.8	612.8	324.8	38.0	1.000129
24500.0	397.0	-27.2	34.1	562.1	611.0	323.9	37.2	1.000127
25000.0	388.6	-28.6	34.5	553.4	609.3	324.0	35.4	1.000125
25500.0	380.4	-29.9	34.9	544.7	607.6	325.8	34.7	1.000122
26000.0	372.3	-31.3	35.3	536.3	605.9			1.000120
26500.0	364.5	-32.7	35.7	527.9	604.2			1.000118

STATION ALTITUDE 4051.00 FEET MSL
7 DEC. 76 1330 HRS MST
ASCENSION NO. 397

MANDATORY LEVELS
3420030397
JALLEN

WSTM SITE COORDINATES
450451.60 FEET E
464023.05 FEET N

TABLE X

P	PRESSURE MLL IBARS	GEOPOTENTIAL FEET	TEMPERATURE		REL. HUM. PERCENT	WIND DATA		
			AIR DEGREES	TEMPPOINT CENTIGRADE		DIRECTION DEGREES (TN)	SPEED KNOTS	
	850.0	5013.	7.0	-7.0	36.	245.2	4.4	
	800.0	6639.	4.0	-9.1	38.	340.6	12.9	
	750.0	8254.	2.0	-9.5	41.	.5	22.9	
	700.0	10175.	2.2	-11.0	37.	12.3	19.7	
	650.0	12131.	-1	-13.3	36.	354.3	26.7	
	600.0	14220.	-3.5	-17.2	34.	336.4	24.2	
	550.0	16458.	-8.2	-21.5	22.	232.9	29.5	
	500.0	18950.	-14.0	-26.4	34.	334.3	35.3	
	450.0	21457.	-19.5	-31.8	33.	331.7	34.1	
	400.0	24290.	-26.7	-37.8	34.	323.9	37.8	